

DALI-2 DT6 LED Drivers

HED1040/D2

Constant Current

HYTRONIK®



Product Description

This series of LED drivers are DALI-2 DT6 dimmable with maximum power output ranging from 9W to 45W. They all come with Switch-Dim interface by using Push switch (retractive switch). Various form factor and different structure/size provide flexibility which is ideal for direct projects or new luminaire design for lighting manufactures.



Features

- DALI-2 with DALI feedback
- Switch-Dim (Push switch)
- PWM 1KHz (1-100%)
- Active PFC design
- Logarithmic Dimming
- Linear Dimming
- Configurable constant current (CC) output via DIP switches
- Permanent setting memory, protected against loss of power
- Loop-in & loop-out terminal for efficient installation
- Short-circuit Protection
- Overload Protection
- Open-circuit Protection
- 5-year warranty, designed for long lifetime up to 50,000 hours

Output Configuration

HED1040/D2,40W

1200mA	●●●●
1150mA	○●●●
1100mA	●○●●
1050mA	●●○●
1000mA	●●●○
950mA	○●●○
900mA	●○●○
850mA	●●○○
800mA	○●○○
750mA	●○○○
700mA	○○○○
	1 2 3 4



Warning: Please make sure the correct current is selected before starting the driver!

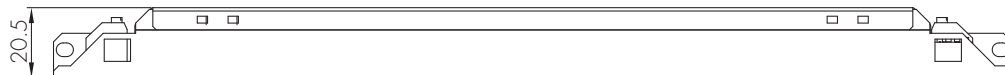
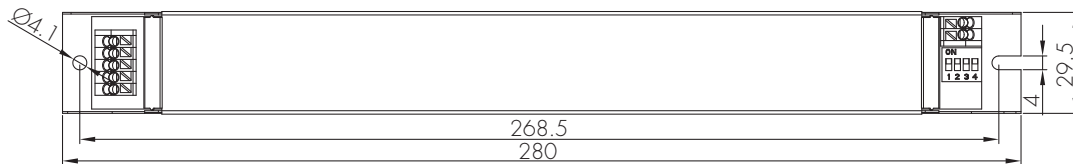
Technical Specifications

Model No.		HED1040/D2
Input	Mains Voltage	220~240VAC 50/60Hz
	Mains Current	0.205~0.185A
	Power Factor	0.95
	Max. Efficiency	88%
	Leakage Current	<0.25mA
Output	Ripple Current	<3%
	Uout Max.	60V
	Turn-on Time	<0.5s
	Dimming Interface	Switch-Dim
Environment	Operation Temp.	-20~+50°C
	Case Temp. (Max.)	80°C
	IP Rating	IP20
Safety and EMC	EMC Standard	EN55015, EN61547, EN61000-3-2/-3-3
	Safety Standard	EN61347-1, EN61347-2-13
	Dielectric strength	Input→output: 3000VAC / 5mA / 1min
	Abnormal protection	Output short-circuit protection, Overload Protection, Open-circuit Protection

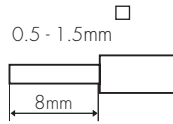
Model No.	Max. output power/current/voltage range			
HED1040/D2	33W/700mA /6-48V	36W/750mA /6-48V	37W/800mA /6-46V	39W/850mA /6-46V
	40W/900mA /6-44V	40W/950mA /6-42V	40W/1000mA /6-40V	40W/1050mA /6-38V
	40W/1100mA /6-36V	40W/1150mA /6-35V	40W/1200mA /6-34V	

Mechanical Structure & Dimensions

Model: HED1040/D2 40W



Wire Preparation



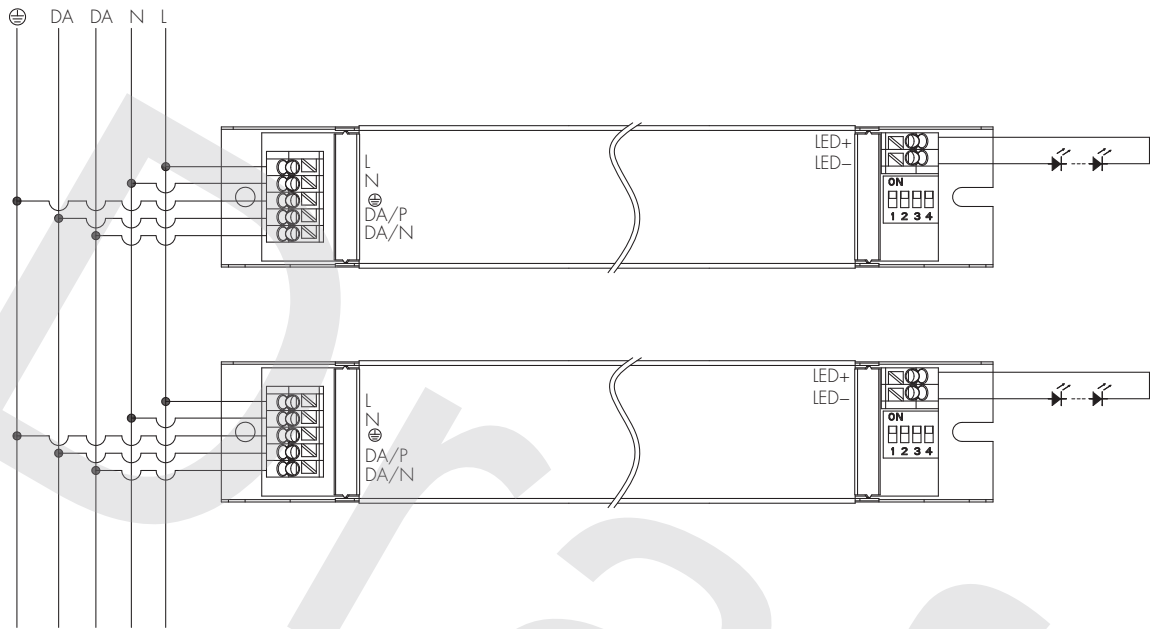
To make or release the wire from the terminal, use a screwdriver to push down the button.

1. 200 metres (total) max. for 1mm² CSA (Ta = 50°C)
2. 300 metres (total) max. for 1.5mm² CSA (Ta = 50°C)

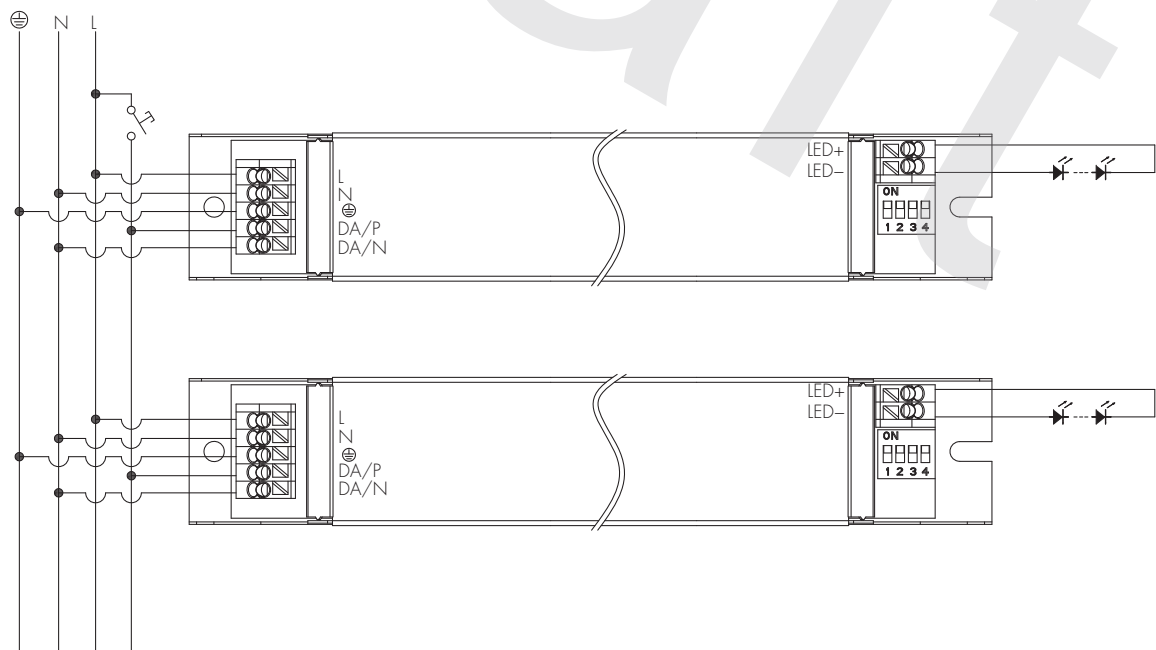
Wiring Diagram

Model: HED1040/D2

Wiring Diagram For DALI



Wiring Diagram For Switch-Dim



Loading and In-rush Current

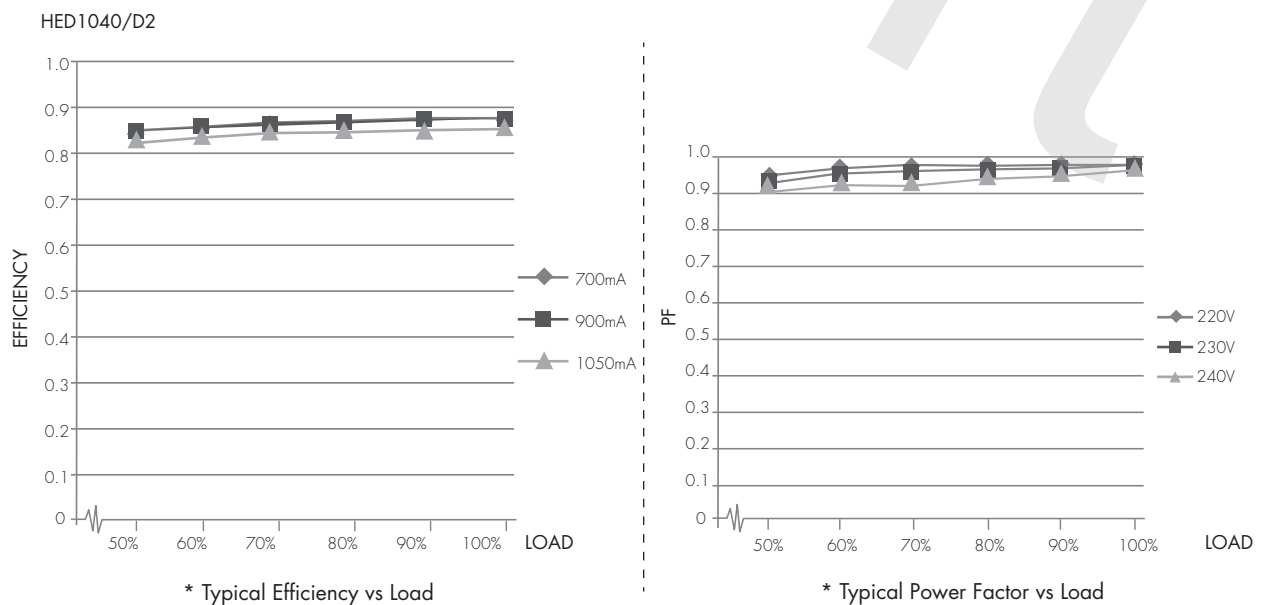
Model	HED1040/D2
In-rush Current (I _{max.})	25A
Pulse Time	15 μs

Circuit Breaker Information

Automatic circuit breaker type	B16A	B10A	B13A	B20A	B25A
HED1040/D2	48	30	39	60	75

The data above is calculated according to the formula: Maximum Amount = $16 / (P_n / 230)$. In order to provide a more reliable reference in real application, the data have been revised to take 60% of the number calculated, i.e. $16 / (P_n / 230) \times 60\%$. Please kindly take note that the calculation is based on ABB circuit breaker series S200. Actual values may differ due to different types of circuit breaker used and installation environment.

Performance Characteristics



Dimming Interface Operation Notes

DALI

This series of products are supplied as 'plug n'play DALI' or 'independent DALI' system ready.

These models are also fully DALI addressable and may be assigned to groups within the limits specified by the DALI protocol or supporting DALI controllers by using a DALI programming tool.

Switch-Dim

The provided Switch-Dim interface allows for a simple dimming method using commercially available non-latching (momentary) wall switches. Up to 64 LED drivers maybe connected to one switch.

Switch Action	Response
Short press (<0.4 second) Note: short press has to be longer than 0.1s, or it will be invalid.	Toggle light on / off
Long press (>0.4 second)	Toggle dim light / increase brightness
Synchronization	
Switch Action	Response
Long press (>1.5 seconds)	All lights will dim down to minimum then return to 50% brightness

* The maximum length of the wires from push to driver should be no more than 20 meters.

Additional Information / Documents

1. Regarding precautions for LED driver installation and operation, please kindly refer to [www.hytronik.com/download ->knowledge ->LED Drivers - Precautions for Product Installation and Operation](http://www.hytronik.com/download->knowledge->LED%20Drivers%20-%20Precautions%20for%20Product%20Installation%20and%20Operation)
2. Data sheet is subject to change without notice. Please always refer to the most recent release on [www.hytronik.com/products/bluetooth technology ->Bluetooth Drivers](http://www.hytronik.com/products/bluetooth%20technology->Bluetooth%20Drivers)
3. Regarding Hytronik standard guarantee policy, please refer to [www.hytronik.com/download ->knowledge ->Hytronik Standard Guarantee Policy](http://www.hytronik.com/download->knowledge->Hytronik%20Standard%20Guarantee%20Policy)